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| AUTHOR | Call, Richard W. |
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ABSTRACT

To determine whether the scholastic averages of resident students at York College, Pennsylvania are significantly different from those of commuting students, 200 resident students were compared with 200 commuting students. The groups were randomly selected and matched in terms of sex, college class, marital status, and intelligence. Scholastic achievement was measured by their college quality point average. Statistical analysis of the data indicated that there was no significant difference between resident and commuting students in regard to scholastic average. Incidental to the research, a comparison was made of the total resident and commuting populations (609 resident and 923 commuters) without attempting to match samples. The comparison showed no significant difference between the populations in regard to scholastic achievement, but the commuters scored consistently higher averages than did the resident students. (DB)

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TITLE OF RESEARCH PRACTICUM

# A Comparison Of Resident Students' Quality Point Averages With Those Of Commuting Students.

CORE MODULE

Applied Educational Research and Evaluation

by

Richard W. Call, Ed.M.

York College of Pennsylvania

CLUSTER COORDINATOR

Dr. Kenneth Varcce

Philadelphia

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Research Practicum
R. W. Call

1. Title

The research practicum is entitled, "A Comparison Of Resident Students' Quality Point Averages With Those Of Commuting Students."

2. Statement of Problem

The problem asks the question, "Do students at York College who live on campus have scholastic averages that are any different from those of commuting students?"

3. Hypothesis

The hypothesis postulates that the scholastic averages of resident students are not significantly different from those of commuting students.

4. Background and Significance of Study

One of the reasons that York College requires students to live on campus is the assumption that residence halls are conducive to academic achievement. The study tests this notion.

York College is at a crossroad. The resident population is growing and the commuter population is shrinking. The trend suggests a number of questions. For example, how will the trend effect the total student population? Should York encourage the growth of the resident population which implies the building of new facilities at a time when across the land colleges are faced with partially filled or empty dormitories? If it is demonstrated that living in college residence halls improves academic achievement, it would be a reasonable justification for construction of additional buildings and altering present housing policy. (Presently, only freshmen are required to live in college residence. Perhaps, residence hall

policy should be revised to include upperclassmen.)

Although, the objectives of this research project are modest, depending upon results, it appears that it could lead to more involved studies. If it is discovered that resident hall students achieve significantly higher academically than do commuters, then this would suggest analysis of the variables involved in the residence hall environment. If on the other hand the reverse is true (commuters are better scholastically), then it would be the commuting environment that would require the analysis.

On the National scene there is motion in the direction of non-traditional programs of study. (Nova's Doctoral program is a case-in-point.) Perhaps the whole idea of campus centered education would be a good research project on a larger scale. The question being, "How important is the campus relative to scholastic achievement?"

A perusal of the literature on the proposal question has uncovered very little research specific to the question, however, in the Educational Record, there is an article entitled, "The Impact of Dormitory Living on Students", by Alexander W. Astin (1973). The analysis indicated that dormitory living increased the student's chances of completing college, and raised the general level of student satisfaction with the undergraduate experience.

Research has also been done by A. W. Chickering (1971) on the analysis of residency variables entitled, "Educational Outcomes for Commuters and Residents."

Chickering's focus was essentially on the "educational outcomes" of the commuter and resident student. His study indicated that in longitudinal terms (four years), the commuters and residents are very similar in

intellectual development, but that substantial differences exist in the range of extracurricular experiences and interpersonal relationships.

M. Stack (1965) reported in the Personnel and Guidance Journal research entitled, "Commuter and Residence Hall Students Compared." Stack investigated the problems and needs of resident and commuter groups. He discovered that commuters had significantly greater problems than resident students and that they also had significantly lower reading comprehension and vocabulary scores.

T. Harrington (1972) reviews the literature in regard to commuting students in the Journal of College Student Personnel, and states that researchers have been negligent in describing their populations. He asks the question, "What are the benefits resulting from commuting?" He suggests we break the educational lock-step and search for alternatives. He feels that the open-university and innovative concepts need research to examine the effectiveness of differential learning environments.

A review of the Education Index, the Dissertation Abstracts, and the Psychological Abstracts has uncovered a sizable bibliography relative to commuters and resident students, but by and large the studies were descriptive in nature and their emphasis is remedial. The research study asks a single question, "Does a student's residence significantly effect his scholastic average?" The group matching makes an effort to control all variables except the housing environment (commuter or resident student). If the living situation is not significant to academic achievement, then educators should stop pretending that it is. If the living situation is significant to academic achievement, then educational planning should be on the basis of that significance. This study is an effort to supply hard data to concept or misconception.

5. Definition of Terms

The following terms are defined for the purpose of the study.

a) On-campus Students - students who reside in college dormitories.

b) Commuting Students - students who live in the homes of their family and commute to college daily.

c) Scholastic Average - Quality Point Average that is computed by dividing the summation of weighted course credit by the sum of course credit where A is equal to 4; B equal to 3; C equal to 2; D equal to 1; and, F equal to 0.

Example:

| Course Credit | | Grade Weight | |
|---|---|---|---|
| 3 | x | 2 (C) | = 6 |
| 6 | x | 3 (B) | = 18 |
| | | | 24 |

24 ÷ 9 = 2.6 Quality Point Average

d) Independent Variable - housing (resident or commuter)

e) Dependent Variable - grade point average

f) Control Variables - age, sex, intelligence, marital and class status (stratified random sample).

g) Intervening Variables - motivation, energy, values, special abilities, health (perhaps some of these can be partially controlled through random selection).

6. Limitations of Study

a) The relatively small sample (200) and the peculiarities of the community that are resistant to control through matching will certainly limit the generalization of results beyond the York College setting.

b) The populations can be reasonably controlled in regard to sex, age, intelligence, marital status, and college class. However, the variables of motivation, values, energy and population idiosyncrasies can only be recognized.

c) The resident population is largely drawn from out of State, at least out of York County, and the commuters are invariably natives of Greater York. What this means in terms of the large populations is unclear but the differences certainly suggest an area of limitation relative to the generalization of results.

7. Basic Assumptions

a) The most generous assumption that is made is that commuters and resident students are homogeneous or reasonably homogeneous groups after matching. It may well be that as populations they are qualitatively different. The whole basis of the research project hinges on the assumption that they are essentially the same and that if there are academic differences, the differences can be somehow attributed to the living situation.

b) Another assumption is the notion that scholastic achievement can be realistically measured. There are grades, and course credit, and formulas, but one wonders about the accuracy of such things.

c) It is assumed that the limitations of the study that were cited earlier in the practicum will not adversely effect the results.

d) It is further assumed that if a research project is carefully designed and meticulously executed that the results will tell something worth knowing.

8. Procedures for Collecting Data

a) The study uses current York College enrollment rosters and identifies matched groups of resident and commuting students. (200 resident students matched with 200 commuters.)

b) Groups are matched in terms of age, sex, intelligence, marital and class status.

c) The study compares these two groups in terms of scholastic achievement as measured by their College Quality Point Average.

d) All the information needed for the study was located in the College Records Office and the Computer Center.

9. Procedures for Treating Data

The following was the procedure for treating the data:

a) Null Hypothesis: Ho: $\overline{X_1} = \overline{X_2}$

b) Alternate Hypothesis: Ha: $\overline{X_1} \neq \overline{X_2}$

c) Level of Significance: $\alpha = .05$

d) Critical z Value: $\pm$ 1.96 (Two tailed test)

Ho will be rejected and Ha accepted if z > + 1.96 or < - 1.96

10. Data Resulting from the Study

The following is the data resulting from the study.

Table I

| | Group I (Resident) | Group II (Commuter) |
|---|---|---|
| Mean | 2.389 | 2.507 |
| S.D. | 0.557 | 0.661 |
| Variance | 0.304 | 0.403 |

Table II

| Critical z | Calculated z |
|---|---|
| $\pm$ 1.960 | - 1.935 |

Table I records the mean, standard deviation and variance of Groups I & II.

Table II records the critical value of z and the calculated value of z.

The null hypothesis cannot be rejected. There is no significant difference between the scholastic averages of Group I and II.

II. Conclusions and Significance

a) The data clearly indicates that there is no significant difference between resident and commuting students in regard to scholastic average.

b) Implications for York College--

1) Regulations requiring students to live in residence halls, for academic reasons, are not supported by the data.

2) The data suggests that York's trend in the direction of a larger resident population will not significantly effect the College population in regard to the level of academic achievement.

3) The construction of additional residence facilities at York cannot be justified on the basis that they are academically beneficial to students.

4) The study implies that York need not be concerned as to the differences in living environment between residents and commuters relative to academic achievement.

c) Implications for other institutions involved with resident and commuting populations--

1) Keeping in mind the limitations of the study, the data can be generalized to include but a single statement.

> "There is no difference in scholastic achievement between resident and commuting students relative to the living environment."

d) Limitations of study--

1) Small sample - 200 resident, 200 commuters.

2) Uncontrolled variables - motivation, energy, values, and local population idiosyncrasies.

3) Accuracy of research controls (stratified random sample).

12. Residual Findings

The following is data incidental to the research. A comparison was made of the total resident and commuting populations without any effort to match samples. (609 resident - 923 commuters)

Table I

| | Group I (Resident) | Group II (Commuter) |
|---|---|---|
| Mean | 2.208 | 2.404 |
| S.D. | 0.711 | 0.831 |
| Variance | 0.498 | 0.682 |

Table II

| Critical z | Calculated z |
|---|---|
| $\pm$ 1.960 | - 4.955 |

Table III

| | Group I | Group II |
|---|---|---|
| D.F. | 199 | 199 |
| Variance | 0.498 | 0.682 |

Table IV

| Critical F | Calculated F |
|---|---|
| 1.0 | 0.73 |

Table I simply records the mean, standard deviation and variance of Groups I & II.

Table II records the critical value of z and the calculated value of z indicating a rejection of null hypothesis Ho: $\overline{X_1} = \overline{X_2}$ and accepting an alternate hypothesis Ha: $\overline{X_1} < \overline{X_2}$.

Table III records the degrees of freedom and variance necessary to measure the homogeneity of variance.

Table IV records the critical value of F and the Calculated value of F clearly indicating that the samples are homogeneous.

Discussion

The incidental findings are, of course, irrelevant to the study. However, they are of interest. Clearly there are variables controlled by the sample matching that shifts the difference between the groups from significant to not significant. It would be interesting to isolate the variables that cause the difference to be significant.

Although the study did not uncover a significant difference between the populations in regard to scholastic achievement, the fact that the commuters scored consistently higher averages than the resident students is also interesting. The literature on the differences between resident and commuter suggests the opposite expectation. (Chickering, 1971) The indication is that York's commuter-resident population, for some reason, does not agree with National expectations.

The residual findings suggest additional research.

13. Further Studies

The study indicates that there is no difference in scholastic achievement between groups of students relative to their living situatio.. (on campus or at home). This finding suggests that research be done at other institutions in order to evaluate the impact of local population idiosyncrasies. If additional research confirms that there is indeed no difference in scholastic achievement as a result of the living situation, the implications may be important to the entire spectrum of non-traditional learning. It would provide hard data to support that which is presently only intuitive supposition.

At York College when the uncontrolled populations are compared, the commuters are significantly higher in scholastic achievement than the resident students. If it is not the living situation that causes the difference, then there remains the question, "What are the causes?"

Research designed to survey the population differences and to isolate the casual factors appears important. If institutions of higher education could isolate the factors involved in higher academic achievement and they were amenable to manipulation, population selection and even educational models could be modified to agree with findings.

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